What is claimed is:

1. A conductive polymer wherein the conductive polymer is obtained by oxidation polymerization, wherein on a matrix of the conductive polymer, at least one organic sulfonate formed by an anion of an organic sulfonic acid and a cation other than a transition metal is coated, or in the matrix of the conductive polymer, at least one organic sulfonate formed by an anion of an organic sulfonic acid and a cation other than a transition metal is included.

2. A conductive polymer according to claim 1, wherein a monomer for the conductive polymer is at least one selected from the group consisting of thiophene, pyrrole and the derivatives thereof.

3. A conductive polymer according to claim 1, wherein the conductive polymer obtained by the oxidation polymerization uses an organic sulfonic acid as a dopant

4. A conductive polymer according to claim 1, wherein the cation of the organic sulfonate is a metal cation other than a transition metal.

5. A conductive polymer according to claim 1, wherein the cation of the organic sulfonate comprises a backbone having at least one selected from the group consisting of five-membered heterocyclic ring, benzene ring, naphthalene ring, tetralin ring and anthracene ring, and at least one selected from the group consisting of NH group and NH_2.

6. A conductive polymer according to claim 1, wherein the anion of the organic sulfonate comprises a backbone having at

least one selected from the group consisting of benzene ring, naphthalene ring, tetralin ring and anthracene ring.

7. A conductive polymer according to claim 1, wherein the anion of the organic sulfonate comprises a backbone having at least one selected from the group consisting of benzene ring, naphthalene ring, tetralin ring and anthracene ring, wherein the backbone is connected to at least one functional group selected from the group consisting of alkyl group having a carbon number of 1 to 12, hydroxyl group, alkoxy carbonyl group having a carbon number of 2 to 10, alkoxyl group and aldehyde group having a carbon number of 1 to 10, and at least one sulfonic acid group.

8. A conductive polymer according to claim 1, wherein the anion of the organic sulfonate comprises a backbone having at least one selected from the group consisting of benzene ring, naphthalene ring, tetralin ring and anthracene ring, wherein the backbone is connected to at least one functional group selected from the group consisting of alkyl group having a carbon number of 1 to 12, hydroxyl group, alkoxy carbonyl group having a carbon number of 2 to 10, alkoxyl group and aldehyde group having a carbon number of 1 to 10, and at least one sulfonic acid group, wherein protons of the sulfonic acid are partially replaced with fluorine.

9. A conductive polymer according to claim 1, wherein the organic sulfonate is a mixture of a first organic sulfonate comprising an anion having a backbone having at least one selected from the group consisting of benzene ring,

naphthalene ring, tetralin ring and anthracene ring, and hydroxyl group and at least one sulfonic acid; and a second organic sulfonate comprising an anion having a backbone having at least one selected from the group consisting of benzene ring, naphthalene ring, tetralin ring and anthracene ring, an aldehyde group having a carbon number of 1 to 10, and at least one sulfonic acid group.

10. A conductive polymer according to claim 1, wherein the oxidation polymerization is chemical oxidation polymerization, wherein the conductive polymer obtained by the chemical oxidation polymerization comprises a transition metal salt of the organic sulfonic acid serving as a dopant as well as serving as an oxidant.

11. A solid electrolytic capacitor, wherein the conductive polymer according to any of claims 1 to 10 is used as a solid electrolyte.